N49RF ERROR SUMMARY
Grav D Test KMCF- KMCF
20 July 2016

Flight ID: 20160720N1

Sensor or system	Number or Name
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.4
Dewpoint Temp. Probe	TDM.1
Vertical Accelerometer	AccZfilterI.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.2
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.2
Dynamic Sideslip Pressure Probe	PQBETA.1
Flight Directory	acdata/2016/MET/20160720N1

Local Met Data:	Takeoff - 1034Z	Landing – 1344Z
Aircraft Static Pressure (PSM.2)	1018.4 mb	1019.5 mb
Tower Pressure (corrected)	1019.9 mb	1020.9 mb

Notes:
Takeoff / Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis. Cruise altitude for this test flight was at a non-standard 21-22K. AltGPS.3 was used as the source for absolute altitude.

The split between PSM.1 and PSM.2 was only about one millibar on the ground prior to takeoff and after landing (the reference PSM.2 was within 1.5 mb of station pressure). At cruise the split was approx 2 millibars, therefore it appears the problems seen in earlier missions with both static pressure systems have been resolved.

While normally reliable at lower altitudes, both AAD TDM.11 as well as the two analog dew point sensors (TDM.1 and TDM.2) displayed anomalously low values and abnormal oscillations during taxi as well as either during takeoff climb or descent to landing. Therefore, all humidity data for this mission should be considered suspect until reaching cruise altitude of 21-22K. At this intermediate (non-standard) cruise altitude, all three systems appeared to perform normally and correlate well with ground based 12z sounding data.

There were no other issues noted in the measured parameters used to calculate meteorological and navigational parameters.

Expendable Type	Number deployed	Number good	Number of messages transmitted
GPS dropwindsonde	0	0	0

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